

ABSTRACT OF THE DISCLOSURE

In a rotary electric machine, coils to be wound around an armature are wound so as to have a good magnetic balance. In a rotary electric machine formed with four poles, ten slots 6c, and twenty commutator segments 7b, a pair of coils 10 that respectively conduct an electric current to commutator segments 7b adjoining at both sides in the circumferential direction with reference to an arbitrary commutator segment 7b are caused to face permanent magnets 3, that are adjoining poles, to be poles opposite from each other, and one coil 10 is wound in a normal winding state, and the other coil 10, in a reverse winding state.